# Inverse kinematics studies of intermediate energy reactions relevant for single event effects in microelectronics and medical applications

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A new experiment is under preperation to run in April 2004 at The Svedberg Laboratory (TSL) in Uppsala, Sweden. The basic objective is to measure both light and heavy secondary fragments produced from intermediate energy nucleon-nucleus reactions, by applying inverse kinematics techniques and exploiting the unique features of the CELSIUS storage ring at TSL. This project has been largely motivated by two important areas of applications: single event effects (SEEs) in microelectronics and proton beam cancer therapy. High-quality data of secondary fragments and recoils provide stringent constraints for nuclear reaction models that generate critical inputs for realistic SEE simulation models and accurate dosage distribution calculations. The scarcity of such essential recoil data has rendered our research proposal timely. Here we report the first results that demonstrate the feasibility of our experimental setups.

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